A SNAPSHOT OF THE PUBLIC–PRIVATE PARTNERSHIP MONITOR: INDIA

Introduction

The *Public–Private Partnership Monitor: India*, published by the Asian Development Bank, aims to capture the public–private partnership (PPP) landscape in India by giving the reader an understanding of the various laws, institutions, initiatives, sector plans, and subnational policies that characterize the PPP ecosystem. The PPP Monitor also provides business intelligence on the enabling environment, policies, priority sectors, and deals to facilitate informed investment decisions. This snapshot summarizes the critical elements of the PPP Monitor: India.

National Public–Private Partnership Landscape

India, a rapidly growing economy, has set its vision of becoming a $10 trillion economy (₹835.7 trillion) by 2035.[1] However, achieving this goal requires substantial investments in infrastructure and the involvement of multiple stakeholders. India's infrastructure sector primarily utilizes the PPP approach. According to India's Department of Economic Affairs, the country has taken a systematic approach to creating a robust PPP program to deliver high-priority public utilities and infrastructure. From 1990 to 2022, a total of 1,265 PPP projects in different sectors—such as airports, electricity, information and communication technology (ICT), integrated municipal solid waste management, natural gas, ports, railways, roads, water, and sewage—have achieved financial closure.[2] The total investment made in these projects was about $295.56 billion (₹24.70 trillion). During this period, about 3% of the total number of projects (amounting to 5% of the total investment) were cancelled. The road and energy sectors have been the most active, accounting for more than 84% of the total number of projects that achieved financial closure. Energy takes up the highest share of total investments in such projects, followed by roads, airports, ports, railways, information and communication technology, and water and wastewater. Figure 1 shows the total investment in each sector from 1990 to 2022, and the average size of a PPP project in each of the sectors.

Public–Private Partnership Legal and Regulatory Framework

India's approach to PPPs is decentralized, reflecting diverse frameworks across states. State governments and departmental ministries have established their own regulatory structures to steer their choices and accelerate the development of infrastructure. At the central level, the Government of India has developed guidelines, policies, and manuals to promote best practices in PPP development and implementation (Figure 2).

Notes: In this publication, "$" refers to United States dollars. The fiscal year of the Government of India ends on 31 March. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2022 ends on 31 March 2022.

1 All currency equivalents in this snapshot are as of 10 June 2024 ($1 = ₹83.57). Government of India, Ministry of Commerce and Industry, Press Information Bureau. 2018. India Will Become a 10 Trillion Dollar Economy Before 2035: Union Minister Shri Suresh Prabhu. *Press release*. 6 September.

2 World Bank. Infrastructure Finance, PPPs and Guarantees. Custom Query (accessed 3 January 2024).

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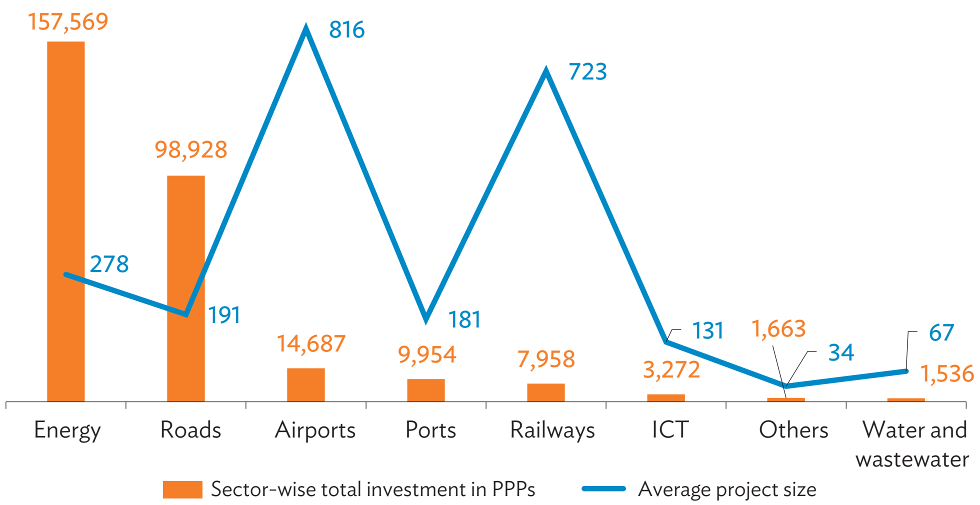
Figure 1: Investments in Public–Private Partnerships by Sector, 1990–2022
($ million)



ICT = information and communication technology, PPP = public–private partnership.

Note: Others are projects related to solid waste management or municipal solid waste.

Source: World Bank. Infrastructure Finance, PPPs and Guarantees. Custom Query (accessed 3 January 2024).

Figure 2: Guidelines, Policy Documents, and Manuals Published by the Government of India

1. Procedure for the approval of PPP projects
2. Guidelines for the formulation, appraisal, and approval of central PPP projects
3. Model concession agreements
4. Post-award contract management guidelines
5. Viability gap funding guidelines (updated in November 2020)
6. PPP guide for practitioners
7. Reference guide for the project implementation mode selection (the Waterfall Framework)

PPP = public–private partnership.

Sources: Government of India, Ministry of Finance, Department of Economic Affairs. 2006. *Procedure for Approval of PPP Projects*. 12 January; Government of India, Ministry of Finance, Department of Economic Affairs. 2015. *Guidelines for Post-Award Contract Management for PPP Concessions*; Government of India, Ministry of Finance, Department of Economic Affairs. 2016. *PPP Guide for Practitioners*; Government of India, Ministry of Finance, Department of Economic Affairs. 2020. *Scheme and Guidelines for Financial Support to PPPs in Infrastructure*; Government of India, Ministry of Finance, Department of Economic Affairs. 2023. Reference Guide for Project Implementation Mode Selection - Waterfall Framework; Government of India, Ministry of Finance, Department of Economic Affairs. 2023. *Reference Guide for PPP Project Appraisal;* and NITI Aayog. Model Concession Agreements.

Eligible sectors for Public–Private Partnerships

The sectors eligible for project implementation under the PPP mode are listed in Figure 3. The list is comprehensive, and it comprises the critical sectors and subsectors of the country.

Figure 3: Eligible Sectors for Public–Private Partnership

Communication

- Telecommunication (fixed network)
- Telecommunication towers
- Telecommunication and telecom services
- Data centers

Energy

- Electricity generation
- Electricity transmission
- Electricity distribution
- Oil, gas, and liquefied natural gas storage facility
- Energy storage systems

Water and Sanitation

- Solid waste management
- Water treatment plants
- Sewage collection, treatment, and disposal system
- Irrigation (dams, channels, embankments)
- Stormwater drainage system

Social and Commercial Infrastructure

- Education institutions
- Sports infrastructure
- Hospitals
- Tourism infrastructure
- Postharvest storage
- Terminal markets
- Soil-testing laboratories
- Cold chain
- Affordable housing
- Affordable rental housing
- Exhibits and convention
- Common infrastructure

Transport and Logistics

- Roads and bridges
- Ports
- Shipyards
- Inland waterways
- Airports
- Railway tracks
- Railway terminal infrastructure
- Urban public transport
- Logistics infrastructure
- Bulk material transportation pipeline

Source: Government of India, Ministry of Finance, Department of Economic Affairs. Updated Harmonized Master List of Infrastructure Subsectors (as of October 2022).

National institutional framework for Public–Private Partnership promotion

There are a number of institutions with defined roles and responsibilities coordinating to agree upon decisions pertaining to infrastructure development. Figure 4 describes the key institutions involved in the PPP landscape.

Figure 4: Key Institutions in the Public–Private Partnership Landscape

Institution	Role	Institution	Role
Department of Economic Affairs	DEA is responsible for • policy-level matters • financial support (VGF scheme, etc.) • developing toolkits for decision-making in PPP projects	**Empowered Institution in consideration of VGF**	• Considers the sanction of projects for VGF of up to ₹1,000 million for each eligible project, subject to the budgetary ceiling indicated by the Ministry of Finance
Infrastructure Finance Secretariat	• IFS streamlines the process of overseeing policy matters in the infrastructure sector. • IFS has two divisions: (i) Infrastructure Support and Development Division, and (ii) Infrastructure Policy and Planning Division. • The Private Investment Unit (formerly PPP Cell) has been subsumed under IFS.	**Empowered Committee in consideration of VGF**	• Considers the sanction of projects for VGF from ₹1,000 million up to ₹2,000 million upon recommendation by the Empowered Institution for each eligible project, subject to the budgetary ceiling indicated by the Ministry of Finance
PPP Vertical of NITI Aayog	• Formulation of policies • Financing of investments • Promotion of PPPs as a preferred mode • Recommendations on institutional reform • Appraisal of PPP projects	**India Infrastructure Project Development Fund**	• Supports the development of PPP projects across central, state, and local governments
Public–Private Partnership Appraisal Committee	• Appraisal of PPP projects at central level. It comprises the following: o Secretary, DEA o Representative, NITI Aayog o Secretary, Department of Expenditure o Secretary, Department of Legal Affairs o Secretary of project sponsoring department		

DEA = Department of Economic Affairs, IFS = Infrastructure Finance Secretariat, PPP = public–private partnership, VGF = viability gap funding.

Sources: Asian Development Bank. 2019. *Public–Private Partnership Monitor*. Second Edition; and Government of India, Ministry of Finance, Department of Economic Affairs. About Private Investment Unit.

Government support for Public–Private Partnership projects

The Government of India supports PPP projects through direct and indirect mechanisms across stages of a PPP project life cycle. Figure 5 describes these various support mechanisms.

Figure 5: Government Support Available for Public–Private Partnership Projects

Land acquisition and resettlement	The government supports land acquisition prior to project commencement.	**Clearances**	Government agencies, upon written request of the concessionaires, support project-specific permits, approvals, provisioning of utilities and infrastructure, and other necessary facilities.
Viability gap funding	The Government of India provides VGF of up to 20% of total project cost. For socially desirable sectors, VGF is provided for up to 30% of project cost. The state government may add up to 30% of the project cost.	**Tax subsidies**	Incentives such as tax exemption and duty-free imports; 100% exemption on income tax is available to eligible projects for a period of 10 years.
Government guarantees	The government pays the lenders and financial institutions 70% to 90% of the amount in default, in case of default by the private player.	**Dedicated institutions for long-term funds**	Institutions such as IIFCL, NIIF, NBFID, and Infrastructure NBFCs were created to provide long-term support to infrastructure projects.

IIFCL = India Infrastructure Finance Company Limited, NBFC = nonbanking financial company, NBFID = National Bank for Financing Infrastructure and Development, NIIF = National Investment and Infrastructure Fund, VGF = viability gap funding.

Sources: Asian Development Bank. 2019. *Public–Private Partnership Monitor.* Second Edition; Government of India, Ministry of Finance, Department of Economic Affairs. 2010. *Government Guarantee Policy*; and Government of India, Ministry of Finance, Department of Economic Affairs. 2020. *Scheme for Financial Support to Public Private Partnerships in Infrastructure (Viability Gap Funding)*.

Key sources of Public–Private Partnership financing

While most projects have traditionally relied on domestic bank credit, alternate sources of financing are being encouraged to ensure adequate funding for the projects. Figure 6 shows some of the key funding sources that are now active in the infrastructure space.

Figure 6: Alternate Sources of Financing for Infrastructure Projects

Equity	Bond Market	InVITs and REITs
In almost all infrastructure sectors, 100% foreign direct investment is permitted.	In the recent past, a private placement market has emerged, primarily involving the private placement of corporate bonds among wholesale investors.	Infrastructure Investment Trusts (InVITs) enable participation in infrastructure projects by owning units of the trust. Real Estate Investment Trusts (REITs) allow investment in large-scale, income-generating real estate.
Development Financial Institutions	**Rupee-Denominated Bonds**	**Partial Credit Guarantee**
Development financial institutions provide steady source of funding to infrastructure projects.	These bonds are issued by an eligible Indian entity in foreign markets; interest payments and principal reimbursements are denominated (expressed) in Indian rupees.	The scheme provides an additional credit support in the form of a "first loss" guarantee; the quantum of guarantee is limited to a certain percentage of the total outstanding debt.
Green Bonds	**Nonbanking Financial Companies**	**Nonrecourse Financing**
Green bonds are fixed-income instrument to support climate and/or environment-linked projects. They may come with tax incentives for investors.	Nonbanking financial companies are primarily engaged in the business of loans and advances, and allow provisioning of infrastructure credit.	Nonrecource financing permits the lender to recover repayments only from profits generated from the project and not from any nonproject revenues or assets of the borrower.

Source: Author's research.

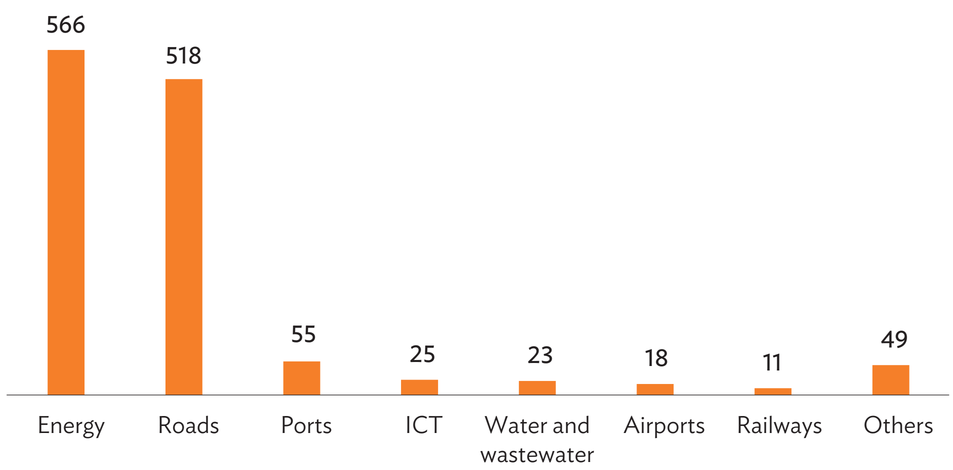
National infrastructure and monetization pipelines

Key initiatives such as the National Infrastructure Pipeline and the National Monetization Pipeline were rolled out to create a defined road map for infrastructure development. The National Infrastructure Pipeline was launched in 2019 to create a road map for the investment of ₹111 trillion ($1.33 trillion) over 5 years from fiscal year (FY) 2019–2020 to FY2024–2025 to develop India's infrastructure. The National Monetization Pipeline was launched in August 2021 and provides a well-laid pipeline of brownfield options that can be monetized to partially fund the National Infrastructure Pipeline.

Public–Private Partnerships Across Sectors

A total of 1,265 projects reached financial closure from 1990 to 2022 (Figure 7) (footnote 2). The majority of projects implemented are in the energy and roads sectors.

Figure 7: Number of Projects with Private Sector Participation That Reached Financial Closure Across Sectors, 1990–2022



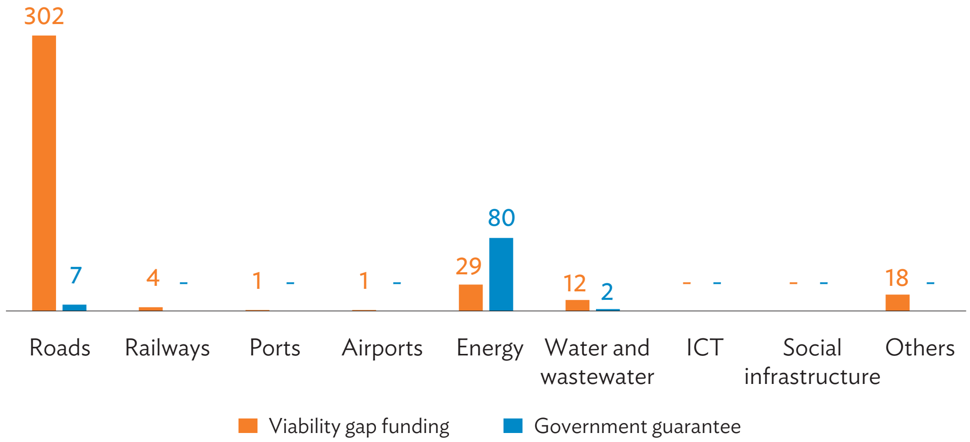
ICT = information and communication technology.

Note: Others are projects related to solid waste management or municipal solid waste.

Source: World Bank. Infrastructure Finance, PPPs and Guarantees. Custom Query (accessed 3 January 2024).

From 1990 through 2022, a total of 367 projects received viability gap funding and 89 projects received government guarantees (Figure 8).

Figure 8: Number of Projects with Private Sector Participation That Received Government Support, 1990–2022



ICT = information and communication technology.

Notes:
1. Others are projects related to solid waste management or municipal solid waste.
2. The hyphen symbol (-) either means that there are no projects in the sector, data are unavailable, or data are not applicable, according to the database.

Source: World Bank. Infrastructure Finance, PPPs and Guarantees. Custom Query (accessed 3 January 2024).

Over the past 3 decades, India has witnessed active foreign sponsor participation. Close to 260 projects attracted foreign sponsors from various countries such as France, Germany, Malaysia, Singapore, the United Arab Emirates, the United Kingdom, and the United States.

The table outlines some of the key updates in terms of projects, regulations, and acts pertaining to PPPs across sectors.

Regulatory Framework of Public–Private Partnerships Across Sectors

Roads and Highways • Financial structuring and regulatory support led to the maturation of the public–private partnership (PPP) ecosystem in the roads and highways sector. • The National Highways Authority of India was established in 1988, marking a crucial milestone. • The introduction of model concession agreements and the launching of the hybrid annuity model have also facilitated the evolution of PPPs in the roads and highways sector.	**Energy** • The energy sector in India is among the most mature sectors for PPPs. • Key acts like the Electricity (Supply) Amendment Act, 1991 and the Electricity Act, 2003 facilitated private sector participation. • Programs like Saubhagya, KUSUM, and the National Smart Grid Mission demonstrate the evolving PPP apparatus in the sector. • Additionally, the National Green Hydrogen Mission was launched by the Government of India in 2023 with the aim to decarbonize the economy, reduce dependence on fossil fuel imports, and enable India to assume technology and market leadership in green hydrogen.
Urban Infrastructure • Water supply and wastewater management involve multiple agencies, with reference documents available. • Solid waste management has a National Action Plan and Model Agreement for Integrated Solid Waste Management; 100% foreign direct investment (FDI) is allowed. • Urban transport features a decentralized institutional framework, a toolkit for PPPs, and viability gap funding assistance for projects involving rolling stock. • Affordable housing received infrastructure status in 2017, allowing active central government participation through PPPs.	**Railways** • Indian Railways has the potential to attract more private investment. • Modernization efforts include 16 stations undergoing redevelopment and inviting partners to invest and operate modern trains through PPP. • Indian Railways plans to pursue a mix of PPP and engineering, procurement, and construction models for station redevelopment, with specific stations like Coimbatore and Vijayawada targeted for PPP mode.
Airports • Cochin, Delhi, and Hyderabad airports showcase successful PPP models in India. • The National Monetization Pipeline earmarked 25 Airport Authority of India (AAI) airports for leasing over fiscal year (FY) 2022–FY2025. • The AAI has already leased eight airports through PPP, and has received about ₹8,960 million concession fees for these six airports and ₹23.5 billion as upfront fee toward the capital expenditure incurred by the AAI.	**Ports** • Private investments are crucial for competitive maritime trade, with about 70% of the value carried through ports. • India’s private sector involvement in ports began in 1996, with guidelines and amendments to the Major Ports Act, 1963. • Private sector participation includes leasing existing assets and building new ones; 100% FDI is allowed in PPP projects.
Health care • The healthcare sector in India has a comprehensive policy and regulatory structure. • The government allows 100% FDI for greenfield projects and 75% FDI for brownfield projects.	**Education** • Education in India is a concurrent subject, with central and state governments responsible for policy and support. • Key policies include the Right to Education Act, 2009, and the National Education Policy, 2020. • There are no model concession agreements for education PPPs, other than medical education. However, 100% FDI is allowed.

Source: Author’s research.

Recent Initiatives

The PPP landscape in India has a dynamic nature, with frequent interventions to foster a more favorable environment for private sector participation. This section aims to capture some of those initiatives in the last 4 years.

Evolving support mechanisms for implementing public–private partnership projects

(i) **Formation of the Infrastructure Finance Secretariat.** The Department of Economic Affairs formed the Infrastructure Finance Secretariat to streamline the process of overseeing policy matters in the infrastructure sector.

(ii) **PPP transaction advisors.** The Department of Economic Affairs empaneled 12 transaction advisors to support project-sponsoring authorities. The panel simplifies the process of appointing transaction advisors. A manual for the use of a panel of transaction advisors for PPP projects was published in July 2022.[3]

(iii) **Innovative project financing.** Infrastructure Investment Trusts (InvITs) and Real Estate Investment Trusts are investment instruments for infrastructure projects which offer benefits like regular income distribution and reduced investment risk. InvITs had raised more than ₹102 billion ($1.22 billion) from investors in the road sector by December 2022. In May 2021, the Power Grid Corporation of India Limited completed the monetization of its first lot of assets with a gross block value of more than ₹70.5 billion ($843.69 million) through InvITs.

(iv) **India Infrastructure Project Development Fund.** With an outlay of ₹1.5 billion ($18.07 million) over FY2022 through FY2025, the Government of India has enhanced the features of the India Infrastructure Project Development Fund scheme to allow the project-sponsoring authority to avail funding of up to ₹50 million ($0.6 million) per project for onboarding empaneled transaction advisors.

(v) **Creation of the National Bank for Financing Infrastructure and Development.** Banks and financial institutions have been a major source of funding for infrastructure projects in India. The creation of the National Bank for Financing Infrastructure and Development (NABFID) was announced in the Union Budget for 2021. Consequently, the Parliament enacted the NABFID Act, 2021, which came into force on 19 April 2021. The NABFID has since been functional.

(vi) **Formulation of model concession agreements for e-buses.** In January 2019, NITI Aayog developed and published the model concession agreement for introducing electric buses (e-buses) in cities as public transportation, under an operating expense basis through PPP mode. The document aims to enable city governments to develop specific concession plans for the introduction of e-buses in cities, in alignment with the central government's vision to achieve 40% use of e-buses by 2030.

(vii) **Formulation of model concession agreement for storage of food grains.** In May 2023, the Food Corporation of India developed and published the model concession agreement for building and operating storage of food grains projects through PPP. The document aims to enable optimal utilization of resources and adoption of international best practices.

(viii) **Development of a multimodal logistics park through PPP.** The Union Minister of Road Transport and Highways announced in 2021 the creation of six multimodal logistics parks at strategic locations in the country to reduce logistics costs and help strengthen the country's economy.

[3] Government of India, Ministry of Finance, Department of Economic Affairs, Infrastructure Finance Secretariat. 2022. *Transaction Advisors for PPP Projects: Manual for Use of the Panel*.

(ix) **Scheme for inviting private investment in medical education.** To bridge the demand–supply gap and accelerate investments in health care, the Government of India envisions the use of PPP mode in the healthcare sector. NITI Aayog published concession agreement guidelines for setting up medical colleges and for upgrading hospitals through PPP in June 2020.

(x) **Ropeway-based public transport system through PPP.** Because of land scarcity and hilly terrain, the development of road transport is difficult in hilly areas, resulting in the need to develop a ropeway-based public transport system. A draft model concession agreement for setting up passenger ropeway projects through PPP was released in September 2020.

Sector developments at the national level

(i) **Ports.** The Ministry of Ports, Shipping and Waterways launched a new model concession agreement in November 2021 to provide clarity on the responsibilities and obligations of parties and remedial measures in case of change in law.

(ii) **Logistics.** The National Logistics Policy, launched in September 2022, aims to make the industry more efficient, lower costs, ensure quick last-mile delivery, and encourage private sector investments in multimodal logistics parks.

(iii) **Airports.** The Airports Economic Regulatory Authority of India (Amendment) Act, 2021 allows tariff determination for a "group of airports" by way of amending the definition of "major airport." The bill amends the provisions of the law in relation to tariffs for single airports.

(iv) **Power.** The Electricity (Amendment) Bill, 2022 provides for the establishment of the Electricity Contract Enforcement Authority, cost-reflective tariffs for the retail sale of electricity, and a payment security mechanism to ensure timely payment to companies.

(v) **Roads.** The cabinet approved amendments to the toll–operate–transfer model in 2019 to monetize public-funded national highway projects and generate funds for further development efforts.

Sector developments at subnational level

(i) Gujarat's Education Department released a resolution in July 2021 for "Residential Schools of Excellence on PPP Mode" to provide free quality education from grades 6 to 12 to meritorious students in government and grant-in-aid schools.

(ii) The Tamil Nadu Housing Board issued directions in May 2022 to implement housing schemes for low-income groups and economically weaker sections through PPP.

(iii) The Maharashtra State Industrial Cluster Development Programme released in February 2023 a regional summit synopsis outlining Maharashtra's vision to become a $1 trillion economy by 2026–2027. It contained the provision to establish common facility centers to enhance the competitiveness of micro and small enterprises using the PPP mode.

(iv) Kerala's Draft Industrial and Commercial Policy, 2022 emphasizes establishing technical centers of excellence, research infrastructure, and innovation labs (including mega food parks) using the PPP mode.

Way Forward

The future of PPPs in India holds promise as PPPs are key contributors to infrastructure advancement and economic expansion. PPPs are expected to play a significant role in closing the infrastructure gap, propelling economic growth, and achieving development goals, thereby contributing to India's growth ambitions as outlined in the National Infrastructure Pipeline. The Government of India has maintained a strong focus on infrastructure growth, as demonstrated by initiatives such as the PM Gati Shakti Master Plan. This plan is designed to steer the development of contemporary infrastructure in the country through harmonious collaboration, integrated planning, and coordination of infrastructure projects. The PPP sector in India can be enhanced by fine-tuning regulatory frameworks at the state level, addressing financial issues, accelerating dispute resolution, and strengthening the authority's project monitoring capabilities. By fostering cooperation between the public and private sectors, PPPs ensure that the benefits of infrastructure development reach all societal segments, promoting fair progress and sustainable development across the country.

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